

CONVERSION TO ORGANIC



The rate of adoption of organic growing practices in Australia continues to increase, based upon the success of existing organic farms, developing export and domestic markets, advances in appropriate technology (such as steam weeders and biological controls eg Tricoderma), and the general increase in knowledge and concern about the environmental impact of agriculture. AOJ Media Consultant, Tim Marshall, reports.

Many farmers have become convinced that organic-sustainable farming is the way to go in the future. Most have already adjusted their conventional practices to include more sustainable practices, but are unable to decide how to progress their activities to become completely organic. For these farmers and the many in the future who will ask the question, "how do I convert to organic?", there is little available research or reliable, published advice. The intending organic farmer poses questions such as how will yields be affected; how can I supply nutrients, especially nitrogen; how can I achieve effective weed, pest and disease control; how much will it cost and where are the markets? These intending organic producers may be able to meet with an experienced organic farmer and receive some helpful advice, which they hope will be translatable to their farm and their country. Access to sound information, however, depends on location, proximity of long-term organic growers, and the willingness of organic growers to assist potential competitors. While most organic growers are happy to share their advice, it may not always be useful. Undoubtedly some intending converts suffer from intentionally or accidentally poor anecdotal information, or from information that simply does not apply to the convert's situation, enterprise, or financial circumstances.

While we can identify working, viable organic farms, a single strategy for conversion has not emerged, and this most important problem is infrequently studied. We should not expect research establishments to queue at the farm gate waiting to study the conversion process either, as researchers in agriculture do not favour very long-term processes and there are still few funding agencies with a long-term vision for organic-sustainable farming.

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CONVERSION OR TRANSITION?

Two terms are frequently applied to the process of becoming organic: conversion and transition. The term 'conversion' is used more often in Europe and Australia, whereas the term 'transition' is more common in the USA literature. Some people prefer the religious overtones of the word 'conversion', as it implies a holistic change and a fundamental change of attitude or 'belief system'.

The term 'transition' has validity too, in that it contains the concept of a timeframe. In the period of change between systems, growers do not have access to the chemical tools of the conventional system, but may not yet have established protective or defensive benefits of the organic system, such as soil health and biological activity, and environmental enhancement to support natural biological controls. This takes time.

Whatever the term used, the processes and experiences of producers will be similar.

THE SUBSTITUTION PHASE

The questions for many begin as: what can I use instead of superphosphate, what can I use instead of urea, or what can I use instead of Roundup? This is what Dr. Stuart Hill has called "the substitution phase". Most successful organic farmers experienced this stage. As they progressed in their conversion process they stopped asking about substi-

tution and began to ask much deeper questions about the design and management of the farming system.

During this questioning phase the grower is confronting the first major hurdle of conversion, which is to do with attitude change. This is a change that needs to occur because the approach to farming problems is fundamentally different in an organic system. The old linear 'input-output' approach was appropriate to a 'control' mentality in our use of the earth, but it must give way to a holistic or 'systems' view in order to work with and alongside natural processes.

THE HOLISTIC APPROACH

We mean by a holistic approach one that goes beyond mere symptoms and apparent causes, to look at the whole context of a problem. What are the root causes? How does the problem and the solution impact on every other aspect of farm management and how do other activities impact on the problem? The whole system is more than just the sum of the component parts. You cannot

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ride the parts of the bicycle, they have to be carefully assembled in a precise manner before they work as a bicycle should. If you assemble the bike and leave out some parts it may still work, but not as well as it could. Seeing the whole bicycle or the whole system is a particular skill that needs to be learned. Some of this can be gleaned from a manual but some is really never learned until you have ridden the bicycle. Yet more will never be learnt until you have put the bicycle together and taken it apart a few times. In other words practice is just as important as theory in farming as it is in riding or fixing a bicycle.

CHANGES IN SOIL ECOSYSTEM

Aside from attitude change, the other part to the conversion story is the change that occurs to the farm, particularly within the soil. Converting organic growers are usually attempting to rebuild soil ecosystems that have been destroyed by vegetation removal, burning, cultivation, chemical fertilisers and broad-spectrum synthetic pesticides, over a period of perhaps 150 years or so.

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Other changes required in the physical environment of the farm may include protection of hilltops, creek banks, steep slopes, provision of refuge areas for natural beneficial animals and insects, and protection of spray-affected boundaries, which need to be fenced and treed.

These changes take time and require financial planning. Soil changes in particular are the essential reason for requiring a time period for conversion prior to certification as an organic unit.

SPEED OF CONVERSION

Another major issue in organics is whether conversions should be slow or fast. Some organic leaders say "you can't be half pregnant and you can't be half organic". They will not accept semi-converted (half-organic, half-conventional) farms or planned conversion-over-time. Their religious fervor over the concept of a dramatic and instantaneous 'conversion' is why some others avoid the term altogether in favour of 'transition', accepting that it will not be an instantaneous change.

The concern over this point of conversion or transition is explained by the prior commitment of those who decided to make this cathartic change and because of the totality of their commitment. Conversion is not a decision made easily because the implication is that there will be no retreat (although in fact a delay or even reversal of some planned actions is a feature of most conversions). Many growers refer to their conversion to or-

ganic as 'cold turkey', an interesting reference to both the suddenness of the change and the weaning of land off of synthetic 'chemical' dependency.

In the final analysis, only the farmer can decide how fast to convert, as only the farmer has the whole picture of the agronomic, economic and social pressures on the farm.

CERTIFICATION

To fully exploit the financial benefits of organics, access premium-price markets, and assert a commitment to sustainability, organic farmers make a declaration of 'organicness', known as organic certification. Once this step has been taken there is a great reluctance to return to synthetic chemicals to solve problems, both because the organic grower needs to believe that the new system can work, and because

there will usually be a financial penalty (such as delay in accessing price premiums, or continuing to pay certification fees for a service they cannot use).

Depending on the certification organisation chosen, the actual point in the conversion process at which certification can occur will vary. There is a conflict sometimes between the converting farmer's need for financial recognition of the effort of conversion and the certification rules. The minimum time period for conversion is established by the relevant organic standards. In Australia the *National Standard for Organic and Bio-Dynamic Agriculture* establishes the following minimum periods:

To use a Conversion label

12 months since the last use of non-permitted inputs or practices

To use an Organic label

36 months since the last use of non-permitted inputs or practices

These periods may be extended or reduced in exceptional circumstances, in the following ways:

- The certification body may extend the period if it believes that soil ecosystems are impacted by previous chemical use, or if the grower is not able to display an ability to manage problems using accepted organic approaches and solutions.

- In the case of perennial crops, the conversion period is applied from

the end of the growing season in which synthetic inputs were applied, rather than the actual date of application.

- In rare circumstances, the period may be reduced for land in pristine condition, such as land that has been under pasture for many years, with no agricultural inputs (note: this provision is very infrequently applied).

In any case, all growers will undergo a minimum twelve-month 'pre-certification' period, during which time they will receive at least two site inspections. This period was introduced to enable fuller 'supervision' of the conversion process before the certification mark can be applied. It has effectively prevented an earlier phenomenon, where growers paid for 'fast-track' certification, dumped a single crop on the organic market, and then disappeared.

Not all farmers will need or seek certification. Some may choose to grow organic but will continue to market their produce into conventional channels. All major markets expect and require that a producer is certified prior to entry to that organic market.

SOIL OR PRODUCT TESTING

The certification organisation may have strict rules about soil or product testing. Growers who convert prior to contact with these groups will often take their own nutrient and pesticide residue samples for testing. Knowledge of the base-line status of the soil could be important for deciding early actions and is useful as a later reference.

Nutrient tests for organic farms should be undertaken by an experienced laboratory and include information on pH, organic matter, carbon/nitrogen ratio, cation exchange capacity, cation balance, total soluble salt, available nitrogen (N) and phosphorus (P) and total N & P (estimate), calcium, potassium and sulfur and other nutrients.

Growers who do not experience any nutrient deficiency or apparent unexplained yield loss may feel that a soil test is not required.

Certification protocols require that pesticide residue samples be taken by an auditor or other independent authorized personnel, rather than by the grower.

WEEDS

Weed 'control' is a good example of the perceptual and attitudinal changes which occur in organic farmers. ▶

The conventional system does not tolerate weeds, often spends energy and dollars controlling them even when there is not a demonstrable economic return, and commits the farmer to further expenditure when the weeds reappear for the next annual cycle.

An organic system works with nature and recognises the tendency for plant cover to develop where there was none before. Organic growers therefore generally encourage those weeds that are easily controlled when it is time for the crop to be sown, or weeds that do not significantly compete with the crop. Instead of trying to totally control the environment of the crop they are happy to edge the weed population towards a kinder mix of species. Such a practice requires a different way of seeing, and a more ecological approach that is focused on management, rather than control.

COST OF CONVERSION

All of the above will have an effect on the financial arrangements of the farm, both income and outgoings.

Yields are the single most important factor affecting viability. Yield predictions are generally pessimistic; if a reasonable level of management and good husbandry is applied, yields can remain quite good during and after conversion. Some crops are harder to move in organic markets and do not receive high premiums. Meat markets for instance, are still relatively poorly developed and require the entry of more abattoirs, retailers and/or distributors and exporters. This situation is now improving and meat markets are currently one of the fastest growing categories of organic produce.

As in all farming, compromises may be required between the best enterprise for the sustainability of the farm and the need for returns. A complete change of enterprise is sometimes required, and very often small adaptations, such as new varieties better suited to organic methods, or different planting times and distances, is called for. This is sometimes the most costly aspect of conversion, as it implies capital expenditure, such as new equipment.

Typical equipment change would include acquisition of non-inversion tillage gear, or weed management tools such as rod weeders, flame weeders and brush hoes.

Longer and more sustainable rotations can also have a major cost impact. For instance the most profitable crops (such as wheat) may be grown less frequently, or in smaller areas, in order to integrate soil-rejuvenating crops or a longer pasture phase.

CONVERSION PLAN

The advantages of a documented conversion plan, or Organic Management Plan (OMP) are enormous. Doing this well is similar to preparing what we know as a 'farm plan', integrating all aspects of management into it. The process can be done by anyone with some time to think about his or her situation, but can be sped up by working with an advisor or in a study group with other growers.

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It is important to bear in mind that all aspects of the farm may need to change during conversion, and need to be planned for

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and farm visits to see what others are doing. Joining both a local and a national organisation is a good way to meet other organic farmers in your area and to keep up with changes in standards and certification rules.

On-farm trials with organic products are an important part of conversion. This means running out test strips, so that visual and yield comparisons can be made between different products or between use of the product and an untreated area (control).

DEALING WITH NEIGHBOURS

Neighbours should be informed of your intention to become a certified organic grower. Depending on the individual relationship, this may be best done in conversation, or in writing. Your certifier may be able to supply a form letter designed for this purpose. Include local government and any public utilities in your contact list, as they may apply chemicals too. Many government authorities, such as the Plague Locust Commission, now keep a register of the location of organic farms.

Where there are unprotected boundaries, the conversion plan should include the establishment of windbreaks. Usually these will be best planned as multi-row, multi-species tree breaks. Until these are established, crops may need to be set back from the boundary. Most certifiers do have a requirement for some biodiversity areas within the farm, and,

planned and managed well, windbreaks can perform this function as well.

Where multi-row windbreaks cannot be established, the certifier may impose a requirement for crop along the boundary (eg the outer two or three rows of orchard trees, or several header-widths of cereal crops) to be separately harvested and marketed as conventional produce.

Remember that neighbours are entitled to spray their land, but not yours. Ask them to take wind direction into account when spraying. If they inform you before they spray, you can observe the weather and the precision of their application, to satisfy yourself that no contamination occurs. Most people want to do the right thing. They also know that they may be held responsible for loss of markets if they contaminate your produce. If contamination does occur, immediately notify your certifier, the Department of Agriculture, the EPA and local government. Arrange for plant samples to be taken ASAP, by an organic auditor, the Department of Agriculture or an independent consultant.

FIND YOUR OWN PACE

The important questions about how to convert are little different from any other management decision in the context of the organic farm. They need to be answered in a holistic way, with appropriate reference to the individual situation of the farm.

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Some growers will need to convert quickly in order to maintain enthusiasm. Others will need to start slowly in order to pay for adjustments and to learn new management practices. Most farmers will fit into the second category and will begin with one or two paddocks or blocks, adding some land each season until the whole property is organic. Often the addition of new paddocks can be based on the rotation plan, using the pasture phase of the cycle to

nurse each paddock through the 3-year conversion period.

Allow some flexibility in the conversion plan, as some of the management tools will require fine-tuning which only comes with experience, and a slow start ensures that financial implications of changes are not disastrous.

Just how you get there is less important than the end goal - an organic, sustainable, financially rewarding and personally satisfying farming system.